

CLAIMS:

1. A system for the delivery of medicament comprising  
5 a medicament container;

a dispensing mechanism for dispensing medicament from the medicament container;

10 an electronic data management system comprising

a memory for storage of data;

15 a microprocessor for performing operations on said data; and

a transmitter for transmitting a signal relating to the data or the outcome of an operation on the data; and

20 a communicator for wireless communication with a network computer system to enable transfer of data between the network computer system and the electronic data management system.

25 2. A system according to claim 1, wherein the communicator enables two-way transfer of data between the network computer system and the electronic data management system.

30 3. A system according to either of claims 1 or 2, wherein the data is communicable between the network computer system and the electronic data management system in encrypted form.

35 4. A system according to any of claims 1 to 3, wherein the communicator employs radiofrequency or optical signals.

5. A system according to any of claims 1 to 4, wherein the communicator communicates with the network computer system via a gateway thereto.

sub. a3

6. A system according to any of claims 1 to 4, wherein the communicator includes an embedded network server.

5 7. A system according to any of claims 1 to 6, wherein the communicator communicates with the network computer system via a second communications device having telecommunications capability.

*Sub. 4  
5/8 10/02/91*  
8. A system according to claim 7, wherein the telecommunications device comprises a cellular phone or pager.

*Sub. 4  
5/8 10/02/91*  
9. A system according to any of claims 6 to 8, wherein the communicator communicates with the second communications device using spread spectrum radiofrequency signals.

10. A system according to any of claims 1 to 9, wherein the network computer system comprises a public access network computer system.

11. A system according to any of claims 1 to 9, wherein the network computer system comprises a private access network computer system.

12. A system according to any of claims 1 to 11, wherein the communicator enables communication with a user-specific network address in the network computer system.

25 *5/28 6/28*  
13. A system according to claim 12, wherein the user-specific network address is selected from the group consisting of a web-site address, an e-mail address and a file transfer protocol address.

30 *Sub. 45*  
14. A system according to either of claims 12 or 13, wherein the user-specific network address is accessible to a remote information source such that information from said remote information source can be made available thereto.

*Sub 15* 15. A system according to claim 14, wherein information from the user-specific network address can be made available to the remote information source.

*Sub 16* 16. A system according to either of claims 14 or 15, wherein the remote information source is a medicament prescriber.

17. A system according to either of claims 14 or 15, wherein the remote information source is a pharmacy.

18. A system according to either of claims 14 or 15, wherein the remote information source is an emergency assistance provider.

19. A system according to either of claims 14 or 15, wherein the remote information source is a manufacturer of medicament or medicament delivery systems.

20. A system according to either of claims 14 or 15, wherein the remote information source is a research establishment.

*Sub 21* 21. A system according to claim 15, wherein the remote information source is an environmental monitoring station.

*Sub 22* 22. A system according to any of claims 1 to 21, additionally comprising a datalink for linking to a local data store to enable communication of data between the local data store and the microprocessor.

*Sub 23* 23. A system according to claim 22, wherein the datalink comprises an infrared emitter and sensor.

*Sub 24* 24. A system according to either of claims 22 or 23, wherein the local data store comprises a personal computer or set-top box.

25. A system according to any of claims 1 to 24, additionally comprising a data input system for user input of data to the electronic data management system.

5 *Sub 5* 26. A system according to claim 25, wherein said data input system comprises a man machine interface selected from the group consisting of a keypad, voice recognition interface, graphical user interface (GUI) or biometrics interface.

10 *Sub 10* 27. A system according to any of claims 1 to 26, additionally comprising a display for display of data from the electronic data management system to the user.

15 28. A system according to any of claims 1 to 27, wherein said electronic data management system includes a predictive algorithm or look-up table for calculating the optimum amount of medicament to dispense.

20 *Sub 20* 29. A system according to claim 28, wherein the memory includes a dose memory for storing dosage data and reference is made to the dose memory in calculating the optimum amount of medicament to dispense.

25 *Sub. a10* 30. A system according to any of claims 1 to 29, additionally comprising a selector for selecting the amount of medicament to dispense from said dispensing mechanism.

31. A system according to claim 30, wherein the selector is manually operable.

30 32. A system according to claim 31, wherein the selector is operable in response to a signal from the transmitter.

35 *Sub. a11* 33. A system according to any of claims 1 to 32, additionally comprising a detector for detecting dispensing from the medicament container, wherein said detector communicates dispensing data to the electronic data management system.

34. A system according to any of claims 1 to 33, additionally comprising a geographic positioning system.

5 35. A system for the delivery of inhalable medicament according to any of claims 1 to 34 additionally comprising a sensor which senses the breath of a user, wherein the sensor communicates breath data to the electronic data management system.

10 *gegenüber* 36. A system according to claim 35, wherein said sensor comprises a breath-movable element which is movable in response to the breath of a patient.

15 37. A system according to claim 36, wherein said breath-movable element is selected from the group consisting of a vane, a sail, a piston and an impeller.

20 38. A system according to claim 35, wherein the sensor comprises a pressure sensor for sensing the pressure profile associated with the breath of a user.

25 39. A system according to claim 35, wherein the sensor comprises an airflow sensor for sensing the airflow profile associated with the breath of a user.

40. A system according to claim 35, wherein the sensor comprises a temperature sensor for sensing the temperature profile associated with the breath of a user.

25 41. A system according to claim 35, wherein the sensor comprises a moisture sensor for sensing the moisture profile associated with the breath of a user.

30 42. A system according to claim 35, wherein the sensor comprises a gas sensor for sensing the oxygen or carbon dioxide profile associated with the breath of a user.

*sub a12* 43 A system according to any of claims 35 to 42, wherein said breath data includes breath cycle data.

5 44. A system according to any of claims 35 to 42, wherein said breath data includes peak flow data.

10 45. A system according to any of claims 35 to 44, additionally comprising an actuator for actuating the dispensing mechanism, said actuator being actuatable in response to a trigger signal from the transmitter.

*sub a2* 46. A system according to claim 45, wherein the electronic data management system includes a predictive algorithm or look-up table for deriving from the breath data when to transmit the trigger signal.

15 47. A system according to any of claims 35 to 46, wherein said medicament container is an aerosol container and the dispensing mechanism is an aerosol valve.

20 48. A system according to any of claims 35 to 46, wherein said medicament container is a dry-powder container.

25 49. A system according to any of claims 45 to 48, wherein said actuator comprises an energy store for storing energy which energy is releasable to actuate the dispensing mechanism of the medicament container.

50. A data communicator for use with a medicament dispenser comprising  
an electronic data management system comprising

30 a memory for storage of data;

a microprocessor for performing operations on said data; and

35 a transmitter for transmitting a signal relating to the data or the outcome of an operation on the data;

a communicator for communicating wirelessly with a network computer system to enable communication of data between the network computer system and the microprocessor; and

5

a coupling mechanism for coupling the data communicator to the medicament dispenser.

51. Kit of parts comprising a data communicator according to claim 50 and a medicament dispenser comprising a medicament container; and a dispensing mechanism for dispensing medicament from the medicament container.

add a1  
ABSTRACT